We claim:

1. A hybrid cytokine comprising:

a) a polypeptide which has greater than about 40% sequence identity with interleukin-7;

b) a polypeptide which has greater than about 40% sequence identity with the beta chain of HGF; and

wherein the hybrid cytokine complex is not isolated from a natural source.

2. The hybrid cytokine of claim 1 further comprising an oligosaccharide linker between a) and b).

3. The hybrid cytokine of claim 2 wherein the oligosaccharide linker is a low molecular weight form of heparan sulfate.

4. The hybrid cytokine of claim 3 wherein the low molecular weight of heparan sulfate has a molecular weight less that about 3000 kD.

5. A hybrid cytokine complex comprising:

a) a cytokine or biologically-active variant thereof;

b) a growth factor, or biologically-active variant therof; and

c) a flexible linking moiety adjoining a) and b)

wherein the hybrid cytokine complex is not isolated from a natural source.

6. The hybrid cytokine complex of claim 5 wherein the flexible linking moiety is an oligosaccharide.

7. The hybrid cytokine of claim 6 wherein the oligosaccharide linker is a low molecular form of heparan sulfate.

8. The hybrid cytokine of claim 7 wherein the low molecular weight form of heparan sulfate has a molecular weight of less than about 3000 kD.

9. A biological preparation in which at least 95% by weight of the proteinaceous matter in the preparation comprises the complex of claim 5.

10. A biological preparation in which at least 60% by weight of the proteinaceous matter in the preparation comprises the complex of claim 5.

11. A biological preparation in which at least 30% by weight of the proteinaceous matter in the preparation comprises the complex of claim 5.

12. A method of treating lymphocyte-related disorders, comprising administering to a host in need for such treatment an effective amount of the complex of claim 5.

13. A method of treating lymphocyte-related disorders, comprising administering to a host in need for such treatment an effective amount of the complex of claim 9.

14. A method of treating lymphocyte-related disorders, comprising administering to a host in need for such treatment an effective amount of the complex of claim 10.

15. A method of treating lymphocyte-related disorders, comprising administering to a host in need for such treatment an effective amount of the complex of claim 11.

16. The complex of claim 9, furthered characterized in that it is free from protease activity.

17. A process for producing a hybrid cytokine comprising the β-chain of hepatocyte growth factor (HGF) and rIL7, said method comprising:

(a) obtaining recombinantly-derived β-chain of hepatocyte growth factor (HGF) by:

(1) cloning HGFβ cDNA into mammalian or prokoryotic expression vectors and transfecting or transforming the vectors into mammalian or prokoryotic cells;

(2) growing the transfected or transformed cells *in vitro*;

(3) isolating purified β-chain of hepatocyte growth factor (HGF) by extraction from the cell culture;

and

(b) obtaining IL-7 from a recombinant or natural source;

(c) linking the recombinantly-derived β-chain of hepatocyte growth factor (HGF) of step (a) with the IL-7 of step (b) by way of a linker molecule.

18. A hybrid cytokine complex comprising:

a) interleukin-7;

b) the beta chain of HGF;

c) a flexible linking moiety adjoining a) and b);

wherein the hybrid cytokine complex is not isolated from a natural source.

19. The hybrid cytokine complex of claim 12 wherein the flexible linking moiety is an oligosaccharide linker.

20. The hybrid cytokine complex of claim 19 wherein the oligosaccharide linker is a low molecular weight form of heparan sulfate.

21. The hybrid cytokine complex of claim 20 wherein the molecular weight form of heparan sulfate has a molecular weight less than about 3000 kD.

22. A bimolecular protein complex comprising:

a) a polypeptide which has greater than about 40% sequence identity with interleukin-7;

b) a polypeptide which has greater than about 40% sequence identity with the beta chain of HGF; and

wherein the bimolecular protein complex supports the proliferation and differentiation of pre-pro-B-cells.

23. The biomolecular protein of claim 22 further comprising an oligosaccharide linker between a) and b).

24. The biomolecular protein of claim 23 wherein the oligosaccharide linker is a low molecular weight form of heparan sulfate.

25. The biomolecular protein of claim 24 wherein the low molecular weight form of heparan sulfate has a molecular weight less than 3000 kD.

26. A purified hybrid cytokine complex preparation comprising:

a) a hybrid cytokine complex comprising interleukin-7 and the beta claim of HGF;

b) excipient; and

wherein the hybrid cytokine complex preparation is more than about 40% hybrid cytokine complex.

27. A method for forming a hybrid cytokine complex supporting the proliferation and differentiation of pre-pro-B-cells, said method comprising:

a) obtaining a cytokine or biologically-active variant thereof;

b) obtaining a growth factor or a biologically-active variant thereof; and

c) linking the cytokine of step (a) to the growth factor of step (b) using an oligosaccharide linker.

28. An expression vector containing the cDNA sequence for the B-chain component of hepatocyte growth factor.

29. A cell transformed by the expression vector of claim 28.

30. The cell of claim 29 comprising a Chinese hamster ovary cell.

31. The cell of claim 29 comprising E. coli.

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